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MORAL PERIODICITY.

AGAIN the earth has performed its annual journey round the sun, and without pausing even for an instant to take breath, has started anew upon another circuit. Not so with the human passengers it carries. Unconscious of the whirling ball on which they travel, they seize the opportunity of looking back upon what they have accomplished during the journey, and forward with interest and curiosity into the dim vista before them. Not, however, that the great majority know or care anything about the nature of the cycle that has been completed. They are 'observers of times' without knowing why. Being finite beings, they cling instinctively to earthly periodicity; and they accept the year, quarter, month, day, hour, set down for them, without caring on what principle, or by whom the calculation has been made. When Noah's dove could find no restingplace for its feet, it flew back to the Ark; and at this day, if a bird is set free from a balloon at a great altitude, it will return to its prison rather than trust itself in the awful deserts of air. Even so is it with mankind. They dread immensity. They divide their journey into imaginary stages, and please themselves at every new period with the idea that they have accomplished a fact, and reached a restingplace.

How sweet is the night which terminates a laborious day! How blessed the Sunday that follows a restless week! Who does not look upon the new moon with a thrill of antique superstition? But of all the periods into which our lives are divided, there is none so interesting as that which is marked by the termination of one year and the commencement of another. Years are the measure of age; and the old physicians attached a mystical importance to the epochs they form, by supposing that at such periods of life the human constitution reached a critical point. In a day we merely complete a whirl on our own axis; in a month, our little satellite the moon has performed her circular obeisance to us; but in a year we have put a girdle round the mighty sun, and travelled several hundred million of miles through the realms of space. This is the extreme verge of periodicity. Science, indeed, dreams of a Central Sun, round which the other suns and systems circulate; but even if the fact were established, it could afford us no measure of so comparatively minute a speck as human time.

We are told from the pulpit at this season that it is an awful thing to reflect that we are a year nearer the grave. And so it is in a religious point of view, but in no other. We do not think, on resigning ourselves to repose at night, that we have a day less to live; and the holy tranquillity of Sunday is undisturbed by the idea that we are a week nearer eternity. At such times we merely thank God for the past, beseech his blessing on

the present, and turn a hopeful eye towards the future. This hopefulness is inherent in the moral constitution of man, and distinguishes him from the lower animals. It is this which makes him cling to periodicity. It is this which makes him celebrate times and seasons. It is this which makes him draw imaginary lines across his path of life, separating the evil that is past from the good his fancy sees in the distance. How often do we cry, 'Thank God, this dreadful year is over!'—as if supposing that there is some necessary connection between the year and its misfortunes, and fancying that a new cycle of time will bring better things! But although to the practical astronomer this may be a superstition, the moralist sees in it a boon of Providence which elevates the character and conduces to the advancement of the species.

This hopefulness, being instinctive, is found everywhere throughout the world. Everywhere men trample joyfully on the grave of the old year, and hail with acclamations the advent of the new. How can it be otherwise? What old year would any being endowed with human reason wish to live over again? Alas for the perished hopes, the lost loves, the broken friendships, the death-bereavements of a single journey round the sun! All these—and all the bitter moments of humbled pride, disappointed ambition, chilled affection, wounded self-love—we place to the account of the old year; and it is no wonder that we feel a savage joy in contemplating his end. The New Year, on the other hand, is a blank, which we fill up with hopes and visions as thick as motes in the sunbeam, and we therefore welcome its approach, like that of some fabled deity, with songs and libations. This is everywhere the case. Even in that land of mystery which, till recent times, was shut up like a sealed book from the rest of the world, the customs of the season were found to be strictly analogous with those of Europe of the nineteenth century. 'On the occasion of the New Year,' says this humble pen in a graver page than the present, 'all the world exchange bows, visits, compliments, presents of eatables, and articles of dress. It is also the season for the settling of accounts, even if money should have to be borrowed for the emergency; for the dirtiest to sweep their floors and wash their persons; for the very atheist to present himself at the temple; and for all to clothe their faces with smiles, and their limbs with new garments. China sits up to see the New Year come in; she resolves to be kind and happy during its continuance; she forgives God Almighty for the past.*'

In England, the season is not devoted merely to conviviality and family reunions, but likewise to works of

* This is the story of John Wesley, who, on meeting a friend looking still wo-begone some time after a family bereavement, said to him, 'What, have you not forgiven God Almighty yet?'

charity. We visit our poor neighbours in kindness and mercy; we present gifts to our dependents; we feast the very felons in our jails. But it is in its character of a period, a line, a boundary, a resting-place, that the New Year is the most interesting. The earth whirls on at the rate of 1133 miles in the minute, but its denizens stand still to remember and to dream. Our senses receive no special impression when the annual revolution is completed, any more than the mariner knows by his sensations that his vessel is crossing the equinoctial line. But our spirit is awake; we feel as if we were reaching a point; we fancy that in our progressive history we have come to the bottom of the page, and prepare to turn over the leaf. The fact of this periodicity is interesting; but the character of our thoughts at the time is still more so. On one side is gloom, on the other light. Man, like the earth which carries him, has always the sun in his face, and darkness behind.

It may be said that this idea is more fanciful than real; that we are so constituted as to be always looking backward and forward; and that every transaction we complete brings us to a resting-point. Yes, to a resting-point from which we see the individual transaction, and look on to another. But at the New Year the whole cycle passes under review, and the next opens to our mind's eye in the distance. The petty demarcations by which we divided our path of life, while creeping on, disappear, and we see, 'as from a tower,' the whole region we have traversed. The view is seldom very satisfactory, but always suggestive of hope; and therein lies the benefit of the mental exercise. It is a mistake to say that man descends to the grave: he climbs to it. Even when his outward circumstances are undergoing a decline, his mind, if it have the true manly leaven, rises. Hope grows out of disappointment, and a proud eye and gallant heart are turned towards a new year. We are not to measure the spirit by the purse. The poor scholar who flings over the world—maybe from his garret—the thoughts that are destined to quicken the minds of others, and the hard-working mechanic whose soul opens to receive the gift, have each a feeling that soars above his worldly position. From year to year they continue to climb, not to sink; and their intellectual part may have reached its highest altitude at the same moment when their body seeks the rest of a pauper's grave. The fortunes of the mind and body rarely run in parallel lines; and our constant forgetfulness of this simple and obvious fact is the cause of a thousand mistakes and anomalies.

In a yearly retrospect our judgment is not troubled by the small details which vexed and harassed us during the event. Objects appear in large and perfect masses. We are able to interpret the text by the context. It is like reading history instead of daily politics, and our minds open proportionably to grasp the subject. During the present expiring cycle, for instance, we were tormented by a thousand hopes and fears relative to the destinies of our country; our hearts were full of anger and bitterness; and we launched accusations right and left of incapacity, supineness, or profligacy. But looking from this vantage-ground, all these little eddies disappear, and we see only the flow of a calm majestic stream. The British Pallas still stands proud, tranquil, and alone amid the convulsions of nations, the tide of the world's commerce rippling at her feet, her shield resting against her knee, and her hand clasping gently her dread but idle spear. The change in the view does not occur because the causes of discontent were unreal, but because, seen from a distance, they bear

no proportion to the majestic whole; and for this reason we have often thought that there is something unconsciously philosophical in the New Year's reflections; that they conduce to loftiness as well as kindness of character; and that they minister to that divine flame of Hope which burns the brightest in the bosoms of the great and brave.

Hope, we have said, is the parent of this moral periodicity. When the season of retrospect comes, whether it be daily, monthly, or yearly, we make haste to draw the line of demarcation between the past and the future; and after a survey—in most cases a sad one—of the things that were, we turn our clouded brow and tearful eyes to the rising sun. Were it not for these petty spaces into which human life is divided, how dreary would be the track! An endless day would be almost as bad as an endless night. It is good, then, to hail the New Year: it is good at this season to ponder and to dream: it is good to look steadily back upon the whirl we have had round the sun; and then to gird up our loins and begin a new journey in hope and joy.

L. R.

THE PRISONS OF PARIS AND THEIR TENANTS.

CONCLUDING ARTICLE.

In surveying the prisons of Paris, one is struck with the fact, that some of the most horrible dungeons are found in those buildings which were formerly religious houses. The robe of the abbot, and the cloth that covered his luxurious table, too often hid a fearful vault where some wretched captive starved with cold and hunger. These dreadful places of confinement went by the name of *Vade in Pace*—('Go in Peace'); because it was in that form that sentence was pronounced on those who were doomed to die by this slow torture. Bicêtre and the Abbaye are of this description. The former, which was originally a monastery of Carthusians, and is now used wholly as a lunatic asylum, was formerly used as a prison also; and many who were not mad when they went there, became so in consequence of the miseries they endured. There were both cells and dungeons in this place of confinement; and in both the system appears to have been the 'solitary one,' the merits of which have been so much disputed in the present day. The cells were bad enough, and the dungeons worse. The prisoners were allowed neither light nor fire, nor sufficient food, nor clothes enough to cover them; water streamed down the walls; and the barred aperture that let in air admitted the rain, snow, and wind, and with them such disgusting odours from the sewers, that the poor captives were not only afflicted with the most agonizing rheumatisms from the cold and damp, but with other frightful maladies occasioned by these mephitic gases.

One of the victims of this cruel system was Salomon de Caus, a man of genius of the seventeenth century. At the age of twenty, De Caus had already distinguished himself as an architect, painter, and engineer; and after serving the Prince of Wales and the Elector of Bavaria in these capacities, he returned to France with the avowed desire of giving his country the benefit of a discovery he had made—namely, that the steam of boiling water might be used as a powerful motive force. At that time there resided in Paris an Italian Cressus called Michel Particelli, who was in love with a beautiful woman called Marion de L'Orme; and one day Michel Particelli took Salomon de Caus to the house of Marion de L'Orme, and bade him lavish on the deco-

rations of the building all the resources of his genius. 'Spare nothing,' said he; 'neither gold, nor silver, nor jewels, nor marble, nor precious stuffs of the East or the West: invent, devise: I give you *carte blanche*; and when all is done, draw on me for the amount of your demands.' Salomon de Caus accepted the commission; but alas! whilst he fulfilled it, he had so many opportunities of contemplating the beauty for whom all these luxuries were designed, that he lost his heart to her. Flattered by the admiration of so brilliant a genius, Marion appears at first to have encouraged his suit; but soon wearying of his earnest and passionate love, she got rid of him by recommending him to the notice of the Cardinal de Richelieu.

'He is very clever,' said she in her letter to his eminence, 'and has, according to his own account, discovered a world of strange and surprising things; but I am sorry to say he has also discovered the secret of wearying me to death, and I shall be really obliged if you will relieve me of so troublesome an acquaintance.'

On the following day Salomon de Caus was summoned into the presence of the cardinal minister, to whom he gave an account of his discoveries, especially of the motive powers of steam. The interview was long, and at its termination Salomon de Caus was declared mad, and sent to the Bicêtre. Mademoiselle de L'Orme was told that he had been despatched out of the country on a scientific mission, and as she heard no more of him, she believed it; but two years afterwards, having been requested to show an English traveller, the Marquis of Worcester, the sights of Paris, she took him, amongst other public institutions, to the Bicêtre; and there, as, laughing and talking, they passed a grated cell, a chained and haggard captive darted suddenly to the bars, and cried aloud, 'Marion! Marion! deliver me, deliver me! I have made a discovery that will enrich my country. Deliver me! I am Salomon de Caus!' The letter in which Mademoiselle de L'Orme relates this event has descended to posterity; and she adds that his appearance was so frightful, and her own horror so great, that she left the place 'more dead than alive.'

On the following day the Marquis of Worcester obtained an interview with De Caus; and when he left him, he said, 'In my country, instead of being shut up in a madhouse, that man would have risen to honours, wealth, and station. Despair and captivity have made him really mad now; but when you chained Salomon de Caus in a dungeon not fit for a wild beast, you destroyed the finest genius of the age!' These were terms, in short, in which the very word *Bicêtre* was an instrument of the most diabolical oppression. False and cruel confessions and accusations were extracted by the threat of Bicêtre. Bicêtre was banded from parent to child, and from child to parent; from husband to wife, and from wife to husband; and it needed but a little interest at court, or with some man in power, to be able to fulfil the menace.

Amongst the portraits lately published as illustrations of 'Lamartine's History of the Girondins,' we see that of a beautiful but fantastically-dressed woman called Thénioigne de Mericourt. Thénioigne was a country girl, handsome and ambitious, violent and vicious. When the French Revolution broke out, she came to Paris to play a part in it. They made a heroine of her at first; but at length, disgusted with her depravity, the women laid hands on her, and she was publicly flogged. Strange to say, this profligate creature, who had appeared to be without shame, was so ashamed of this chastisement that she lost her senses. She spent ten years in confinement at Bicêtre, and ten more at the Salpêtrière; and whenever she could escape the vigilance of the keepers, her practice was to take off her clothes, and inflict on herself the same chastisement she had received from others in the streets of Paris.

Louis XVI. diminished many of the horrors of this prison, and ameliorated the condition of the miserable captives; but three thousand persons of one sort or an-

other were found confined within its walls when Mirabeau and his colleagues, in spite of the resistance of the governor, insisted on making their way into its deepest recesses.

Up to the year 1836, it was customary for the public of Paris to resort in great numbers to Bicêtre at certain periods to witness the departure of the criminals condemned to the galleys, and also the preliminary process of chaining them to one another. In 1818 there was an unusual concourse to behold this spectacle; for amongst the galley-slaves was to be seen the famous Comte de Sainte-Hélène, from whose adventures Alexandre Dumas appears to have borrowed some ideas for his celebrated novel of the 'Comte de Monte Christo.' Through the instrumentality of a woman, Coignard (the real name of this personage) had obtained possession of certain papers belonging to a French emigrant of distinction who had died in Spain. By the aid of these documents he succeeded in deceiving the world in the first instance; whilst by his real bravery and conduct he earned for himself genuine honours and titles; first in the War of Independence in Spain, and afterwards under Napoleon. At the Restoration, he was received at the Tuileries, and Louis XVIII. gave him a command and the cross of the Legion of Honour. But one day at a review, in the year 1818, a man called Darius claimed acquaintance with him as an old comrade at the galleys. The Comte de Sainte-Hélène had the impolicy not to acknowledge his friend, and thereupon Darius denounced him; and after this brilliant career, Coignard was again chained to the oar.

It is said to have been the monks themselves who dug out the frightful dungeons of the Abbaye, where the vaults were so low, that no prisoner could hold his head erect in them. Fort L'Evêque (The Bishop's Fort), an ancient seat of ecclesiastical jurisdiction, was also provided with horrible subterranean dungeons, where the prisoners were chained to the walls, whilst their wretched repasts were let down to them through apertures not allowed to be more than five inches wide. In later years the character and inmates of this prison changed, and it became the House of Correction for actors and actresses who quarrelled too loudly, or who inconvenienced the public and the court by refusing to play the parts assigned to them.

It was from the Abbaye that Charlotte Corday wrote that gay letter describing her journey to Paris for the purpose of assassinating Marat, and also her situation in the prison, in which she says, 'For the last two days I have enjoyed perfect peace: my country's happiness is mine. I am extremely well off, and the jailors I find excellent people. To be sure, to preserve me from ennui, they have favoured me with the company of some soldiers, which is more agreeable by day than by night. I complained of this indecency; but nobody cares for my representations.'

Grateful to the advocate that defended her for having said nothing derogatory to the noble motives that had urged her to the crime, she told him that, as a proof of her esteem, she left him to discharge her small account due at the prison, her own property being confiscated. Adam de Lux, deputy from Mayence, proposed to raise a statue to this heroine, inscribed with the motto, 'Greater than Brutus'; for which proposition he lost his head. He said he was proud of dying for Charlotte Corday; at a capital breakfast on the morning of his execution; and as he quitted the Abbaye, handed his cloak to another prisoner, saying, 'Happier than you, I shall need it no more to defend me from the cold.'

Some of the most horrible prisons of Paris were entirely demolished at the latter end of the last century, and amongst these are happily to be reckoned the Grand and the Petit Châtelets, two fortresses built at an early period of French history for the defence of the city. We read in the history of these buildings that the Grand Châtelet was divided into eight different compartments, each of which was distinguished by a name either literally or sarcastically denoting its honours:

for example, one was called The Cradle, another Paradise, and another The Butchery. Then there were Les Puits (The Wells) and Les Oubliettes (The Forgotten); and there was one called La Fosse (The Grave), into which the miserable tenant was let down through a hole in the vault, and which, being in the form of an inverted cone, allowed him neither to stand nor to lie. It was also known by the name of La Chausse d'Hypocras (The Stockings of Hypocras), because the prisoner stood in water up to his knees. Fifteen days was generally the longest term of imprisonment in this frightful receptacle, as, by the end of that period, Death took the affair into his own hands, and set the captive free. There was another dungeon called La Fin d'Aïse (The End of Ease), which was full of filth and reptiles, and equally fatal to human life. Not long before the destruction of these buildings, a young advocate called Varnier made a singular escape from the Grand Châtelet. The offence that brought him there was as follows:—During Voltaire's last visit to Paris, as he was driving one evening along the Pont-Royal, pursued by a mob, crying 'Vive Voltaire!' this young man, Varnier, opened the door of the carriage, and kissing the hand of the patriarch, cried, 'A bas les rois! Vivent les philosophes!' Marais, the inspector of police, being at hand, Varnier was seized, and in spite of the resistance of the people, who handled the inspector very roughly, was carried to the Châtelet. Now it happened that Marais, a man of a brutal and insolent character, was specially attached to this prison, and having Varnier in his power, he took the opportunity of revenging on his unfortunate captive the blows he had himself received. Driven to desperation by this ill treatment, Varnier resolved to fly, or perish in the attempt; and one night that a violent storm of thunder and lightning had momentarily diverted the attention of the keepers from their duty, he effected his object. The neighbouring parish clock struck ten as he found himself in the streets, through which he began to run as fast as his legs could carry him; but he had not gone far when he heard the clashing of arms and the sound of horses' feet behind him—a moment more, and his hopes of life and liberty were for ever frustrated. He cast his eyes about in despair, and as he did so, they fell upon an old woman who was unlocking the door of a small house at a corner. Just as she was about to enter a person spoke to her, towards whom she turned to answer; Varnier seized the opportunity, pushed open the door, and entered the house. All was dark within, and he groped his way along a passage and up some stairs, guided only by the sound of an instrument and a sweet female voice, which was singing an air out of a favourite Italian opera of that day. He had no time to lose, for he expected every moment that the old woman would overtake him; so, on reaching the door of the apartment whence the sounds proceeded, he opened it, and found himself in the presence of a beautiful young female, whose protection and assistance he implored. Moved by his distress, and the wretchedness of his appearance, she promised to conceal him, and he then told who he was; related the story of his horrible captivity and miraculous escape, terminating his narration by calling down curses on the head of the monster Marais. At the name of the inspector the lady started and changed colour; but before any explanation could follow, a loud knock at the outer door, and an angry voice upon the stairs, announced the approach of danger. Pale and trembling, she rose, and pointing to the door of a small inner chamber, she bade him enter there, and be still. He was no sooner shut in, than he heard a man's foot in the room he had just quitted. 'Doubtless her husband or father,' thought Varnier.

'What is the matter with your hands?' asked the young girl: 'they are stained with blood!'

'Give me some water to wash them,' replied the man. 'One of our most important prisoners has escaped this evening,' he added with an oath, 'and I have been revenging myself on the rest of them.'

It was Marais the inspector! He then called for

wine; and after drinking for some time, he went out, telling his daughter he should see her no more that night. 'I must go and divert myself,' he said, 'in order to put this vexatious affair out of my head.'

Through the assistance of this young girl, Varnier finally escaped out of France, accompanied by his protectress; and Marion, the daughter of the inspector, became the wife of the delivered captive.

The Bastille, as everybody knows, was destroyed during the first French Revolution. Here, too, were the most horrible dungeons, vaults hollowed out of the earth nineteen feet below the surface, swarming with rats, toads, and spiders, where the walls were never dry, and the floor was mud and filth. In those instances where the captive was not intended to be starved, or nearly so—for the ordinary rations in all these prisons were so bad and so scanty, that they hardly kept body and soul together—he was permitted to obtain food of a better description if he could afford to pay for it at an extortionate rate; but the abuses were so enormous, that whilst the governors drew handsome revenues from this source, the poor prisoner got very little for his money.

The Man with the Iron Mask, as he is called, lived some time in the Bastille, having been transferred thither from St Margaret's; but the treatment he received in both prisons was quite an exception to the general rule. He was both sumptuously fed and sumptuously clothed; and the governor, St Mars, who was the only person allowed to address him, always did so standing and uncovered; but these were poor compensations for the extreme rigour with which he was watched, and the utter solitude to which he was condemned. The mask was not made of iron, but of velvet with steel springs, and no one ever saw his face except St Mars. An impenetrable veil of mystery covers his early years. Where and how they were passed nobody knows; but he must have been young when taken to St Margaret's, and had probably been a prisoner from his birth. Little doubt exists that he was an elder but illegitimate brother of Louis XIV., whose hardened conscience and selfish nature permitted this barbarous and lifelong incarceration. It is a singular fact, and one that would almost induce the belief that his mother had contrived to conceal him during his childhood, that he had been taught to write—an accomplishment which one might suppose would have been carefully withheld from him whilst in the hands of those who feared him. We only know of two instances in which he attempted to avail himself of this acquirement: the first was at the fortress of St Margaret's, where an unfortunate barber one day observed something white floating on the water under the prisoner's window. Having obtained it, and discovered it to be an exceedingly fine linen shirt, on which some lines were inscribed, he carried it to the governor, who asked him if he had read what was written on it: the man protested he had not; but two days afterwards he was found dead in his bed. The second attempt of this poor victim to communicate his fate to somebody able or willing to aid him, was by writing his name on the bottom of a silver dish with the point of a knife. The governor always waited on him at table, and handed the dishes out to a valet; this last perceived the writing, and thinking to recommend himself, showed it to St Mars. Of course the possessor of such a secret was not permitted to live. On the journey from St Margaret's to the Bastille in 1698, the party halted at the house of a gentleman named Palteau. It was observed here that St Mars ate with the prisoner, and that he sat with a pistol on each side of his plate; but whether the mask was worn at table they could not ascertain, as no one was allowed to enter the room. The diary of the Bastille for the 19th November 1793 contains an entry to the effect that 'The unknown, who always wore a black mask, had been taken ill after attending mass, and was dead so suddenly, that there was no time for the services of the church;' perhaps poisoned with the wafer. He was buried on the 20th in the churchyard of St Paul's, under the name of Macchialet.

His funeral cost forty livres. After the removal of the body, everything in the chamber he occupied was burnt; the walls were strictly examined, scraped, and whitewashed; and the very window-panes were taken out, lest he should have made some mark on them that should furnish a clue to this perilous secret. A person in the neighbourhood, more curious than wise, bribed the gravedigger to open the grave and let him see the corpse: the trunk and the limbs were there, but no head—luckily for this inquisitive gentleman—who would otherwise have probably lost his own.

Some of the offences for which people were shut up in the Bastille, as they appear in the registers, make one wonder how anybody was fortunate enough to keep out of it. It was a common thing, for example, to be thrown into this horrible jail 'for speaking insolently of the king' or 'of the state;' or 'for quarrelling,' if the quarrel happened to inconvenience somebody in power; 'for libelling the Jesuits;' 'for selling or possessing prohibited books;' 'for being suspected;' 'for religion;' 'for treasure-seeking;' 'for wishing to sell yourself to the devil;' 'for interrupting the performance at the Italian Opera;' 'for having spoken insolently to a lady who was a friend of the Comte de Charolais.' A child of seven years of age was imprisoned on account of his name, which was Saint-Père, it being pronounced an insult to religion to bear such a name; and a professor of physic is registered as having been 'transferred to the prison of Charenton, after being thirty years in the Bastille, for administering an improper remedy!' And these incarcerations were not for a month or a year, but for an indefinite time, frequently for life; for, once there, unless some very powerful interest was exerted in your favour, nobody thought it worth while to take you out again. Of the corruption of the court, and the unjustifiable use of power, the following is a remarkable instance:—Louis XVI., in 1787, beginning to perceive that he was deceived by the people about him with regard to public opinion, privately desired a bookseller called Blaizot to place daily in a recess indicated all the political pamphlets that appeared. This was done for some time, till the ministers finding the king better informed than they wished him to be, set spies to discover the source of his knowledge; which, having ascertained, they immediately seized Blaizot, and shut him up in the Bastille; and most assuredly he would never have got out with their consent; but fortunately the king, missing his pamphlets, found out the cause of their non-appearance, and set him free. There is every reason to believe that secret executions—in plain terms, *murders*—were committed by authority in these prisons. Amongst the papers found in the Bastille, certain letters, such as the following, seem to justify this persuasion:—

* To MONS. DE LAUNAY, GOVERNOR OF THE BASTILLE.

'DEAR DE LAUNAY—I send you F—; he is a troublesome subject; keep him for eight days, and then get rid of him.

(Signed) DE SARTINES,
Lieut.-Gen. of Police.'

Memorandum attached to the bottom of the above.—'June —. Arrived F—. After the period named, sent to Mons. De Sartines to inquire under what name he would have him buried.' What strange times the world has lived through!

The original purpose of the Madelonnettes is indicated by its name; but it has often been converted to other uses. Under the monarchy, for example, in 1759, all the flower-girls of Paris—women who went about the city selling bouquets—were shut up in this prison at the request of the *maîtresses-bouquetières*, because these itinerant merchants injured the trade of the stationary ones. And during the first Revolution, the whole company of the principal theatre in Paris were seized and confined here for performing a piece founded on Richardson's novel of 'Pamela;' which, the Jacobins alleged, tended to make the public regret the order of nobility. Although they never expected to pass

those gates except on their way to the scaffold, they appear to have conducted themselves in their confinement with wonderful good sense and cheerfulness. The first thing they did was to set about cleaning the Augean stable they were put into, providing themselves, as they had plenty of money, with brooms and brushes; turning carpenters and upholsterers too, in order to maintain some semblance of decency; but nails and hammers were soon denied them. They jested and laughed, and said all manner of witty things about Agamemnon and Cæsar, and Antigone and Clytemnestra, being reduced to such strange shifts: and, what is better, they performed a number of kind and generous actions; assisting their fellow-prisoners who were poor, and actually procuring the liberation of some by paying their bail; for frequently those who were acquitted by the revolutionary tribunals, were sent back unless they could deposit a considerable sum; and once in prison again, they were as likely to lose their heads as not. Although the fatal *G* was attached to most of their names when sent up to the committee, La Comédie Française, as they called themselves, ultimately escaped the scaffold by the generous aid of the courageous Labassière.

The Temple was erected as a habitation for themselves by the Knights' Templars in the year 1279. As this order, which was partly religious and partly military, was then a great power in Europe, their residence was in accordance with their position. It covered a great deal of ground, which was given to them by Philip III. in return for their having drained some horrible marshes which infected the air of the city, and for having converted the water-weeds and bulrushes into healthy plantations; whilst the interior of the building was more sumptuous than the king's palaces. The chamber of the grand-master was supported by twenty-four pillars of massive silver, wrought with such admirable art into representations of vines, with birds, squirrels, and reptiles amongst the leaves, that 'many people were afraid to touch them.' The chapter-room was paved in mosaic; the beams were of cedar of Lebanon, carved to imitate Mecklin lace; and the decorations were so magnificent, that they dazzled the eyes of the beholders. Amongst these were sixty large vases of solid gold. In the year 1242, Henry III. of England was splendidly entertained here, when there sat at the same table three kings, twelve bishops, twenty-two dukes and barons, and eighteen countesses. In spite of the immense size of the building, the train of the English monarch was so large, that many persons were obliged to pass the night in the street. But the Templars were too rich and powerful: their wealth was coveted, and their power was feared; and fifty-eight years after this grand fête, the knights were arrested, their treasure confiscated, and the walls of the Temple echoed to the groans of Jacques de Molay, the last grand-master, who, constrained by torture to calumnious and absurd accusations against himself and his order, died nobly vindicating both with his latest breath.

Toussaint L'Ouverture, that noble and patriotic negro of St Domingo, who, after liberating his countrymen, and refusing a crown, was basely betrayed into a French prison, lived some time at the Temple before he was conveyed to the fortress of Joux, where grief, indignation, and ill-treatment, broke his great heart.

We cannot quit the precincts of the Temple without recalling the miserable hours spent there by the unfortunate royal family of France; and the bloodstained figure of Simon the cobbler, and the mournful image of the persecuted child, flit sadly before us—that young dauphin of France, who is said to have died of the ill-usage he received, and to have been buried within the walls of the prison. The mystery that hangs over the last act of this tragedy has encouraged three pretenders to assume his name, all of whom are now dead. A fourth claimant, however, survives in the person of the Baron de Richemont, whose name and existence

are scarcely known in this country, and over whose birth and history there hangs a veil that the French themselves do not seem to have wholly penetrated. He is said to be an ultra-republican, though very rich; and so greatly beloved by the lower orders in Paris, that he has been indicated as the original of the German prince, Rodolphe, who is painted as a sort of terrestrial providence in Eugène Sue's notorious novel. It appears certain that he has passed several years of his life in the Austrian prison of Spielberg, which would be sufficient to make any man a republican; and it has been lately confidently asserted that the Duchess D'Angoulême was satisfied of his identity, although, on account of his republicanism, or for some reason unknown, she refused to acknowledge him publicly. One of the facts advanced to give weight to his pretensions is, that when the grave supposed to contain the body of the young dauphin was opened, the remains of a lad of fifteen were discovered, whereas the prince was only ten at the time his death is alleged to have taken place.

RETROSPECT OF MORTALITY.

THE publication of the Registrar-General's Report for the quarter ending the 30th of September last puts us in possession of many interesting facts and particulars, which, while embodying a history of the past, may well serve as guides and warnings for the future. It is not easy to forget the calamity whose cessation has been recently acknowledged by a day of thanksgiving; and whatever tends to assist the inquiry as to its phenomena, its causes, and remedies, can hardly fail at the present time to be productive of good.

It appears from the returns, which comprise all the divisions and districts of England, that the deaths in the three months referred to were 135,364, being 60,492 more than in the corresponding quarter of 1845—an increase of 71 per cent. The number of births was 135,200, thus showing an excess of deaths by 164; and the Report states:—"As the emigrants in the quarter from London, Liverpool, and Plymouth alone amounted, according to the Emigration Commissioners, to 46,558, the population of England has suffered, died, and decreased during the quarter to a degree of which there is no example in the present century."

'The mortality,' continues the Registrar, 'will be found to have been very unequally distributed over the country, and to have generally been greatest in the dense town population. The average annual rate of mortality in the town districts is 26, in the country districts 18, in 1000; during the last quarter these numbers became 41 and 23 respectively.'

'While the mortality has been excessive in nine divisions, it has been below or little above the average in two divisions—the North Midland and the South Midland; or in the counties of Buckingham, Oxford, Northampton, Huntingdon, Bedford, Cambridge, Hereford, Worcester, Leicester, Rutland, Lincoln, Nottingham, Derby; also in the North Riding of Yorkshire, Cumberland, Westmoreland, and North Wales.' And here we observe some of the anomalies in the progress of the epidemic, for we read further—"The difference will be more apparent upon examining the several districts: in some the people have died by hundreds or by thousands; in others not far distant, few have died—the inhabitants have been unusually healthy. "The medical men," says a Registrar, "say that they have had nothing to do."

In London the deaths were 27,109, being double the average, and 9885 more than the births, which numbered 17,224. It appears that not a single case of

death from hydrophobia has been registered in the metropolis during the last five summers. 'Yet,' pursues the Report, 'hydrophobia is inevitably fatal, and medicine is of no more avail when its symptoms are revealed than it is in cholera; but the wise course of removing its causes has been tried, and bids fair to create a permanent blank in the London nosology.'

'The cause of typhus, of influenza, of cholera, and of the like diseases, will not long, we may hope, remain in undisturbed possession of the earth and air of this city. Hydrophobia disappears when the dogs which are liable to become mad or to be bitten every summer are removed by police regulations; so will the other zymotic diseases give way when that putrid, decaying, noisome atmosphere exhaled by churchyards, slaughter-houses, the tanks of dirty-water companies, cesspools, sewers, crowded dwellings, is purified and dissipated. The sewers and cesspools now under our houses will inflict more pain, and destroy more living, than ten thousand mad dogs let loose in the streets: they may as certainly be removed; and yet it is to be feared that many years will elapse before anything effectual is done, or any such satisfactory result can be recorded as the extinction of another disease in this great city.'

Cholera has been, if the term may be permitted, extremely capricious in its visitations, making inroads here and there without any apparent adequate cause; yet its general characteristic is to appear, as the carrion vulture, wherever garbage or rank impurity invites. The different Reports from the sub-registrars are unanimous on this point. In Salisbury, the average deaths for the summer quarter of five years is 48, but during the past quarter the number was 263; and we are informed that 'the cholera visited Salisbury with fearful violence. . . . Salisbury is always an unhealthy place: it is on a low, damp valley, in the midst of water-meadows; the courts and alleys where the lower-classes reside are in a filthy state, and derive no benefit from the general system of cleansing carried on in the main streets. There is a mill-dam; "and any attempt," says Captain Denison, "to improve the general drainage would be impracticable: it would interfere with too many interests." There is a pregnant signification in these concluding words; it contains more than is apparent on a first reading. We might comment on it at length, but shall content ourselves for the present with the remark, that in these days of enlightenment, pounds, shillings, and pence ought not to be held as more precious than the interests of human life and social morals. Newcastle-under-Lyne affords a somewhat similar case. The deaths were 1½ per cent. during the three months. The town is situated on high ground, 400 feet above the sea-level, but 'the Lyne, made the open sewer running through the town, is dammed up by a mill, and sends up from its polluted, black, puddy bed exhalations which poison the inhabitants.' Here, again, *interests versus life!* We are by no means unfriendly to commercial interests, but we would not elevate them to the chief rank in right and privilege.

Again: in Gainsborough, with a population of 26,000, the deaths were three times the average of the season, while in the county of Lincoln generally the mortality was below the average: the cause of the extraordinary difference is manifest—the want of proper drainage, sewage, and sanitary regulations in the town above-named. A comparison, too, between Hull and Manchester is not less striking:—"The population of Hull in 1841 numbered 77,367; the deaths in the summer quarter of the present year were 2754; in Manchester they were 2742, with a population of nearly 200,000. Turning to other parts of the country, we are again struck by inexplicable results: still taking the census of 1841, the Isle of Wight contains 42,550 inhabitants, the deaths from all causes in the period under notice were 368; in Anglesey, among a population of 38,106, the deaths were 191. Is there not something in these anomalies demonstrative of peculiar local causes?

Without attempting to decide the question whether

the cause of cholera be atmospheric or not, we give a summary of the 'Remarks on the Weather,' drawn up by Mr Glaisher of the Greenwich Observatory, and regularly printed in the Registrar's Reports. During the first half of July the temperature of the air was above the average, and below it for the second half; after which, with short exceptions, it was above the average to the end of the quarter. From August 20 to September 15 'was distinguished by a thick and stagnant atmosphere, and the air was for the most part very close and oppressive.' The summer is further described as having been warm and dry, without great heat; thunder-storms frequent; the air unusually dry. 'The magnets have been seldom disturbed during the quarter, and the amount of electricity, though less than usual, seems to have been so in consequence of the less amount of humidity of the air.'

Under the head of rain we find some interesting particulars:—The quantity of rain which fell at Greenwich in July was 2.9 inches; in August, 0.45 inches; in September, 3.3 inches; about an inch less than the average of the same quarter for the preceding eight years, while 'the fall of rain in August was less than has fallen in any August since the year 1819. The average fall of rain at Greenwich from thirty-three years' observations in July is 2.5; in August, 2.4; in September, 2.4 inches. The fall was less than its average at places south of latitude 53 degrees (a line drawn from the Wash to Caernarvon Bay), exclusive of Cornwall and Devonshire; it was about its average fall between 53 degrees and 54 degrees of latitude, and north of 54 degrees the fall was greater than usual.'

The prevalent winds were north-west and south-west, with occasional shifts to north and north-east: when blowing briskly, the direction was the same all over the country, but variable at other times. 'The daily horizontal movement of the air in July was 120 miles; from August 1 to 11, 50 miles; August 12 to 16, 170 miles; and from August 17 to the end of the quarter was about 55 miles, except in September 11 and 12, when it amounted to 190 miles daily. The average daily horizontal movement of the air during the quarter is about 120 miles. Therefore, during the months of August and September, the movement of the air was about one-half the usual amount. . . . This remark applies to Greenwich, where the anemometer is fixed 200 feet above the sea-level. On many days when a strong breeze was blowing on the top of the observatory, and over Blackheath, there was not the slightest motion in the air near the banks of the Thames; and this remarkable calm continued for some days together, particularly from August 19 to 24, on the 29th, from September 1 to 10, and after the 15th. On September 11 and 12, the whole mass of air at all places was in motion; and for the first time for nearly three weeks the hills at Hampstead and Highgate were seen clearly from Greenwich. After the 15th of September to the end of the quarter the air was in very little motion.' We give one more extract from the Registrar's statements, which will enable those who are interested in the subject to compare the progress of the epidemic with the fluctuations of the weather:—'The water of the Thames rose to the temperature of 60 degrees at the end of May; and the weekly deaths in July and August were 152, 339, 678, 783, 926, 823, 1230, 1272, 1663; in the first week of September 2026 deaths from cholera were registered; and the epidemic then rapidly subsiding, the deaths fell to 1682, 839, 434, in the last three weeks of the month. The temperature of the Thames fell below 60 degrees in September 16–22. The deaths from all causes were 3183, or about three times the average number in the first week of September. . . . The mortality from cholera varied in different districts of the metropolis from 8 to 239 in 10,000, and was greatest in the low, the worst-drained, the poorest districts—the districts supplied with water from the Thames between Waterloo Bridge and Battersea New Town.'

We may just note, by way of conclusion, that the

decrease in the weekly rate of mortality in London within the current quarter is extraordinary, falling in some instances to 300 below the average, proving that the sickly, weakly, and intemperate, whose deaths would have made up the usual average, had been previously carried off by the recent epidemic.

TRACINGS OF THE NORTH OF EUROPE.

TROMSØE—KAAFIORD.

It was early on Sunday morning that the steamer came to a pause at Tromsøe. On looking forth, I found that we were in a narrow sea, skirted by gently-sloping green mountains on one side, and an island of no great elevation, but varied by thin plantations, on the other. On the shore of the island appeared the town of Tromsøe, a place of only about 1500 inhabitants, but important from its privilege of trading with foreign ports; it is for this reason composed of better houses than towns of that size usually boast of, while its crowd of vessels, of many various flags and styles of construction, impart to it an air of activity and liveliness which the traveller feels as very refreshing after a week seeing nothing but lonely shores and snow-capt mountains. The steamer pauses here for thirty hours, to enable the merchants of Tromsøe to read their letters from the south, and prepare others to be sent on to Hammerfest—a business for which, in England, the tenth part of the time would probably suffice. As advantage was to be taken of this pause to get the cabins cleaned, we were desired to go ashore, and remain there, if possible, till next day. The three Englishmen lost no time in obeying the request, each taking a light bag containing a few necessities, and never doubting that they would find a tolerable hotel in which to lodge. What was our surprise to be told on landing that there is no hotel in Tromsøe! It has the flags of half-a-dozen nations flying in its harbour, and yet has no regular place of public entertainment beyond a few taverns. But then there was a possibility of our obtaining private lodgings. Attended by a boy to act as spokesman, we went about from one likely house to another in search of accommodation, but in vain. No citizen of Tromsøe moved to take us in on any terms. We were therefore obliged to return to the vessel and intreat a breakfast from the steward. It is but justice to Tromsøe to state, that we had come too early to give its gentlefolks an opportunity of showing us hospitality. There had been a great party the night before, which had broken up at such an hour as made it most unlikely that any of them should see or hear of three English gentlemen seeking lodgings in their town at eight in the morning.

After breakfast we again left the vessel, and our only resource was a walk over the island. I observed on landing that the east end of the town is seated on a bank of shells rising to fully 25 feet above the sea. One of our little party had broken his watch-glass on the voyage, and he was anxious to learn if it could be replaced in Tromsøe, as, if it could not, his means of ascertaining time throughout his residence in the north was at an end. To his great joy we found an *uhrmager* (watchmaker) who was able to furnish him with the important little article required; the cost, too, was not extravagant in the circumstances, being only twenty-four skillings, or about eightpence of English money. Our friend the *uhrmager* we found living in a neatly-furnished house, surrounded by a respectable-looking family. He had come from Copenhagen to practise his trade in this remote place. I was curious to know how near to him was his nearest competitor in business. He told us there was none at Hammerfest, nor any other place to the northward. There was none to the southward till you come to Trondhjem, 400 miles off. At Tórnea, on the Gulf of Bothnia, there was none, nor at any place thereabouts to the north or west of Sundsvall. Finally, his nearest neighbour to the westward must be in Aberdeen or Peterhead. It appeared that his professional range was between latitude 63° and

the pole, and from west longitude 3° to 36°—a monopoly of geographical space perfectly enormous.

The weather was to-day exceedingly mild; nevertheless we found several patches of the snow of last winter in hollows on the top of the island. The wood is here interspersed with small timber houses, some of which are used as summer residences by the merchants of Tromsø, while others are only *lyst-houses*. A Norwegian *lyst-house* is a small tabernacle placed a little way out of town, if possible in a wood, or on the bank of a lake, or at least in a pleasant scene of some kind, always provided with a gallery in front, and sometimes surrounded by a garden. Here the man in easy circumstances loves to spend the evening of the first day of the week, surrounded by his friends. If the weather be pleasant, the party sits in the gallery, or lounges about the garden and other grounds; if not, they retire to the interior. In the evening of our arrival in Tromsø there was an entertainment of this kind given in a *lyst-house* on the hill. A gentleman who was present described it as attended by about twenty of the most considerable persons in the place, among whom was the pastor of a neighbouring parish. There was a fire in the open air to prepare hot water. An immense variety of wines—French, Portuguese, and German—was presented, and brandy and water was copiously indulged in. The gentlemen sauntered about, smoking, in the open air, till eleven o'clock, feeling no inconvenience, notwithstanding that there was a slight drizzle all the time. The sunlight was at that time only sobered, not departed. The affair was described as what in our country would be called dull; much indulgence of the animal appetites, but little conversation, and no sort of spirit or pleasantry. I found that it is the custom over all Norway to devote the Sunday evening to social pleasures. Taking literally the text, 'the evening and the morning was the first day,' they consider the Sabbath as commencing at six o'clock on Saturday, and terminating at the same hour on Sunday—a doctrine in which, I believe, they are countenanced by the pilgrim fathers of America. Accordingly, in Norway, there is no public entertainment, such as theatricals or dancing, permitted by law on Saturday evening; and the more strict class of people will not see their friends even privately at that time. Believing, however, the day of rest and of devotion to be at a close on the Sunday at six o'clock, they feel themselves then at liberty to enter upon any amusement or enjoyment for which they may have an inclination. Even in the houses of the clergy there will be found both card-playing and dancing on this evening, and this without the slightest scandal to their flocks. It is a mistake into which an Englishman is very apt to fall, to regard this custom of the Norwegians as indicative of a disregard for the Christian Sabbath. The error rests primarily in the conception as to what constitutes a natural day. Such, nevertheless, is the influence of habit, that although far from setting myself up in judgment in the case, not only could I never reconcile myself to the Norwegian manner of spending the Sunday evening, but I never could quite free myself of the notion that the people were manifesting an indifference to sacred things.

Tromsø must be regarded as a remarkable creation of commercial industry in a part of the earth which is properly the seat of a primitive people. It has sprung up within the last forty years purely in consequence of the fishing trade of these seas. There was exported from it in 1848, of stock fish (sent to the Mediterranean), 80,000 vogs (a vog is equal to forty pounds English); of split fish (to Russia), 17,000 vogs; of Sei fish, 20,000 vogs. This last kind, which is held in least estimation, and is really a poor article, is sent exclusively to Sweden, for whose humble peasantry it constitutes a relish to still simpler fare. There was also in the same year exported from Tromsø 6160 barrels of oil (chiefly cod-liver oil), 8370 pieces of fox-skin, 2000 other skins, and 23,000 pounds of bones. There are in this town several affluent mercantile families living in a handsome style.

The ladies are noted for good looks and smart dresses. I visited the Stift Amtman, or provincial governor, at his house, and found there every symptom of elegant life—himself a handsome, dignified-looking man, and his lady an exceedingly well-bred person, surrounded by musical instruments and other civilised objects. Yet cross the Sound, and walk three miles along a lonely valley, and you find a camp of Laplanders, exemplifying every usage which has been peculiar to that simple people from the earliest ages. The whole province seems to have come into the hands of the Norwegians only in comparatively modern times, and it is even now thought an extraordinary thing for any one to have visited it. I found on my return to the south that my voyage to Hammerfest was spoken of by Swedes and Norwegians in exactly the same terms as it afterwards was by my own friends at home; nor must this appear too surprising, when we remember the small proportion of the British people who have sojourned in Orkney or Shetland, or made the tour of Connemara.

An amusing trait of democratic ambition was mentioned with regard to Tromsø. Any person in Norway bearing a government office of a certain dignity, or the consulship of some foreign state, is held as standing in a superior rank, and his wife is addressed as *Frue* (equivalent to *My Lady*), and his daughters as *Fruken*, while other ladies are only called *Madame*. I had frequent warnings given me as to the propriety of calling such and such a lady *Frue*, instead of *Madame*. It is a distinction as much insisted on as the essential equality of all the citizens in this non-aristocratic country. Connected with it is the fact that there is a surprising number of foreign consuls in Tromsø. The merchants, it seems, are eager to obtain such appointments, albeit implying some trouble and little profit; or, if they are not anxious, their wives are anxious instead, merely that they may possess a certain external distinction above common citizenship, and that their ladies may command the magical appellative which sets them over the heads of all *madames*.

The next morning was drizzly and ungenial, so that it was with some difficulty I executed a geodetic measurement, in order to ascertain the elevation of the two terraces which belt the shores of the mainland. They proved to be respectively 57 and 143 feet. Afterwards, when we were about to depart, an officer of the law came on board, attended by a butcher, with orders to execute justice upon a dog belonging to one of the English party for having bitten a gentleman in Tromsø. The incident was said to have occurred at the party on the hill the night before, and the authorities had given an order for the death of the animal as a matter of course. The English traveller was at first disposed to treat the charge with ridicule, but found it so serious a matter, that he had to give up his passage, and wait to defend his favourite. Two gentlemen of the Ennis-killen Dragoons, who had come to the harbour in a yacht, offered to remain and see justice done to him, and afterwards to bring him on to Alten in their vessel. Indeed the whole of the English took up the matter keenly. I could not help being amused at the opposite and contrasted lights in which the act of the dog was regarded by the plaintiff and defendant. To the latter it looked such a trifle to make a potholer about—the skin was merely grazed—the dog was only sportive, and meant no harm. To the former it was an affair of gravity. He had been hurt, and his wife was in terror about him. Though the wound were quickly to heal, the dog might afterwards grow mad, and then the gentleman would take ill in the same way. Such, it seems, is a common belief in Norway; and it was adduced by the sufferer on this occasion as an all-sufficient reason for putting poor Glendalough to immediate death. I do not know how the matter ended; but it caused the detention of the dog during all the time I was in the country; and wherever I afterwards went, I found that the story had made its way, and was talked about.

In our onward voyage, we passed the openings of great

fjords, far up which we could see glaciers descending from the lofty *fields* almost to the water's edge. Passing close under the island of Ringvatsø, which is chiefly composed of lofty mountains, I observed a savage valley, closed up towards the sea by a vast rampart of blocks, like the moraine of a glacier. Over the centre of the rampart poured a considerable stream. I was told that within this rampart was a circular lake, from which the name of the island (meaning the *island of the circular lake*) had been taken. Along the valley-side was a ridge of blocks, the lateral portion of the moraine. The mountain of Skalgamtinderne was within sight, covered with eternal snow, of which one downward stream exhibited the usual arch at the bottom for the emission of the water. It was evident that the rampart of blocks formed the dam by which the lake was retained. The course of events was evidently this: a glacier had descended from the great mountain of Skalgamtinderne into the valley, depositing the usual charge of stones at its extremity and along its sides. It had afterwards shrunk up to where we now see it, high in the bosom of the mountain. On its retirement, the moraine acted as a dam, and a lake was the consequence.

Still on and on through a labyrinth of fjords and islands, touching now and then at a kioptman's establishment, where the flag flies merrily in honour of the passing of the steamer. Night, such as it was, set in upon us when we were just about to pass through a portion of the open sea. The small island of Loppin is here the only defence from the roll of the ocean. The mention of this place recalls to me the remark that the horse is an animal as yet little in use in the far north, boats and reindeer superseding it for travelling, while cattle are employed for tillage. There was *once*, however, a horse on Loppin! It had been brought up amongst the cattle there, and had never seen a single creature of its own kind. Being at length transferred to a place on the mainland where there were other horses, it was startled and evidently much annoyed by the sight of its new companions. It could not be induced to associate with them in any labour, and their approach disturbed it in its pasture. The device was at length hit upon to allow this poor beast to go amongst its old friends, the cows and oxen, and it was then once more at perfect ease; nor did it ever afterwards manifest any desire to enter the society of its own species.

At an early hour next morning we found the vessel steering into the Altenfjord, the district which I was to regard as my head-quarters in the north. At Talvig, Quenvig, and other recesses in the rocky coast, I beheld with curiosity those remarkable curtain-like ramparts of alluvial matter, faced with terraces, which have helped so much to give this district celebrity with geologists. By and by we entered a narrow branch of the Altenfjord, called Kaafjord, where an English company has for twenty years past carried on an extensive copper-mining concern. Mr Thomas, the intelligent manager of these works, was on board with us as a passenger, on his return from business at Tromsø; and a previous correspondence having prepared him for my visit, he insisted on my landing at his house, and staying there till I should shape out plans for a future course.

Here, then, in a narrow fjord close upon the 70th parallel, terminated for the present this for me singular expedition. I found myself, however, in the midst of a little colony of my countrymen, for almost necessarily the copper-works are conducted solely by Englishmen. We first see the hill-side partially covered by debris, and huge timber fabrics connected with the works, while large smelting-houses line the shore below. We pass a promontory on which a pretty modern church is situated, and then come in sight of an inner vale, where one of the most prominent objects is a long, low house, with attendant buildings, all smart and fresh, and somewhat like the establishment of a respectable yeoman in England. This may be described as the residentiary house for the works. Along the hill-side, in the rear,

are scattered many small timber-houses, being the residences of the working-people, who number in all about 700. On the shore is a quay, with storehouses, in one of which every conceivable necessary of life is sold. Such is the Kaafjord establishment—a most interesting example of English enterprise and perseverance, by which, for twenty years past, civilised usages and large sums of money have been introduced into what would otherwise be a desert abandoned to bears and wolves. I beheld the whole place not merely with interest, but with respect, because there are heroisms in commerce as well as in war, and these be of them. I could not behold but with a touched spirit the spectacle of a set of educated Englishmen, and Englishwomen too, settling even temporarily in this remote corner of the earth, where for three months they see not the sun, in prosecution of that noble object—the doing of an appointed work, by which to benefit the community, and attain for themselves the just requital of an independent subsistence.

The residentiary house, as I have quaintly but not inaptly called it, is a plain, roomy, and comfortable habitation, where Mr Thomas and his wife, a beautiful young Norwegian lady, are master and mistress, while the other officers of the works are also entertained in it at a general table. I was particularly gratified to find in this extensive family circle a young married daughter of Consul-General Crowe, whose kind attentions to me at Christiania had given me an interest in all that belonged to him. Being so large a group in themselves, they must be the less likely to pine for the want of external society. They receive, however, English visitors like myself every summer, by which their native feelings and usages are ever kept in a certain freshness. As for the winter, it is specially the season of gaiety in Norway. Much interchange of visiting then takes place; not only because it is a time when country business is unavoidably suspended, but because of the facilitation to movement which is afforded by the frozen snowy surface. Every one here speaks with delight of the merry winter season, when all set themselves to be as happy, and to make others as happy, as possible. At Kaafjord the gentlemen have a billiard-table and philosophical instruments. Their scientific observations are regularly reported to the British Association. The ladies have that unfailing attendant on English polite life everywhere—the pianoforte. English books, periodicals, and newspapers come at regular intervals. And so, with active duties lightening the hours, life passes on. I thought I could hear an occasional sigh for distant England, which nothing can ever fully replace to one of its children; but such feelings do not necessarily embitter existence; they only throw a tender haze over its sunshine. I may remark that the Norwegian usages prevail to a great degree in this house, at least so far as concerns hours for meals, and the kinds of food presented at each. The English colony has very wisely endeavoured to adapt itself to the habits of the people among whom they live. Native visitors, therefore, feel nothing strange here; and the inmates must in their turn find matters the more agreeable when they visit the natives.

Like every other sheltered recess in the district, the opening of two valleys which meet at the head of Kaafjord is filled up with a curtain of alluvium, excepting only the ravines through which the rivers descend. This alluvial formation, rising like a wall, with a perfectly flat top, and horizontal terraces seaming its front, has a striking appearance from the house. Its singular aspect naturally leads one to surmise for it a peculiar geological history; and doubtless it has undergone some extraordinary transitions. Manifestly it is composed of the spoils of the two rivers which here flow into the sea. At the mouth of the greater river Alten, not far off, there is a precisely similar formation, but of much greater extent. About ten years ago, when the French Scientific Expedition of the North stopped for some time at Kaafjord, one of the officers, M. Bravais, was

struck by the extraordinary appearance of these great sand-curtains overhanging the beach. He found, along the line of sounds towards Hammerfest, a portion of the rocky coast marked with two lines of erosion or cut terraces at certain heights above the sea, and evidently the work of that element at some remote period when the sea and land stood at different relative levels. Strange to say, it appeared from his barometric measurements that these two lines underwent a gradual rise from Hammerfest southward, until they disappeared at Komagfjord, after an uninterrupted course of twenty-five miles. He nevertheless connected them, after almost as great an interval, with the sandy terraces now described, which are of still higher level, and thus arrived at a hypothesis that the land between Hammerfest and Kaafjord, in rising from the sea, had made a pause, during which the upper line was made; then an angular movement had taken place, causing the southern district to rise farther than the north; then a second pause, during which the lower line was made; after which there had been another unequal *soulèvement*. I now proposed to review this investigation carefully, and with superior means of ascertaining levels—not, I must confess, without a strong suspicion that there was some fallacy in the case, since all similar marks which I had seen in other countries observed an exact level, as do apparently the two terraces extending so great a way on the coast of Norway to the southward.

Mr Paddison, a young English civil engineer and student of geology, had come in the *Prinds Gustaf* in search of sport; but hearing of my purpose, he offered to accompany me, and give his professional assistance in taking the levels. He was now, therefore, like myself, a guest of Mr Thomas. We quickly addressed ourselves to the measurement of the Kaafjord terrace, which we found to be at the front about 220 feet high; but the plain at top rose a little towards the hills, and we had ultimately to set down the entire elevation at 239 feet above high water in the bay. Two terraces on the face were 52 and 123 feet, and there was a faint intermediate one at between 80 and 90. We spent a whole day in examining the neighbouring grounds. In many parts free of alluvial facing, or elevated above it, we found the rocks admirably dressed and polished by the ice of ancient times, the line of the dressing being from south to north, or coincident with the direction of the valley. At one place, upwards of 250 feet above the sea, there was a ridge of native rock extending a considerable way, much like the inverted hull of a ship. It had been all nicely smoothed like some artificial object, as had also been the longitudinal hollow space between it and the hills. Still higher, there rested on the mountain-face a horizontal range of blocks and detritus, evidently the remains of an ancient lateral moraine. Of course these dressings must have taken place in an age anterior to that in which the alluvial terraces had been formed, for otherwise the material of the terraces must have been swept away by the descending ice.

A second day was spent in these investigations. What alone lessened our enjoyment of them was the weather becoming now exceedingly warm, and the consequent and excessive annoyance we sustained from mosquitoes. One of our ladies was kind enough to furnish us with veils of green gauze, wherewith we enshrouded our heads as we went about. Still, the pestilent insects got in about our necks and ears, and made us smart so sorely as greatly to discompose our levelling operations. I could scarcely have believed beforehand that so small and weak a fly had the power of penetrating through a thick woollen stocking in order to exercise its suctorial powers; yet we had ample demonstration that it can do so. In such overgood weather the calm and coolness of the long evening are much enjoyed. I shall not soon forget the impression produced upon me, as we sat quietly in the parlour between ten and eleven o'clock of the second evening, looking along the calm fjord towards the insular mountains, behind which the sun was

still glowing, though dimly, when a gallant war vessel, with all its sails set to catch the indolent breeze, moved into the confined space, and proceeded to cast anchor. So startling an apparition of artificial life in the midst of such a scene, and at such an hour, might have been at an ordinary time of difficult explanation; but Mr and Mrs Thomas had heard of a French corvette having been at Hammerfest a week or two ago, and of a ball which the officers had given the ladies of that hyperborean town—for what clime is too ungenial for French gallantry?—so it was quickly understood that this was the same vessel. On this conclusion, it became certain that we should presently have some fresh additions to the social circle at Kaafjord.

Next morning we were to have proceeded at an early hour with Mr Thomas on an excursion to Raipaa, a subordinate establishment of the Copper Company on the Alten River, where I expected to see some remarkable objects. We were delayed, however, by the arrival of the *Prinds Gustaf* on her return voyage from Hammerfest, with a few ladies of that town on a visit to Mrs Thomas, and also a number of gentlemen, who were permitted to land and spend an hour before the steamer should proceed southward. Sauntering about the shore during this interval, I was introduced by one of the English gentlemen to a person whom he was pleased to entitle the Minister of the North Cape. I beheld a tall, fair-complexioned, somewhat pensive-looking man, of about forty-five, dressed in clothes only partially black, as is the custom of clergymen in Norway. On inquiring strictly who it was I had the honour now to know for the first time, I learned that it was Mr Zeltitz, the pastor of the extreme north parish of Norway, in which the North Cape of course is situated. Being a votary of the Waltonian art, he had come to have a few days' fishing at Kaafjord. I looked with interest on the man whose lot in life it is to keep up the light of Christianity in a region so remote from civilisation, and from all that educated man usually sighs after. Finding him well acquainted with English, I entered into conversation with him regarding his cure. His parish, named Kistrand and Kautokeino, extends over a tract of ground measuring as great a distance from the North Cape southward as there is from Newcastle to Brighton, or from John o' Great's House to Edinburgh—namely, forty-five Norwegian miles. It contains only 2000 inhabitants, mostly Laplanders; but the Laplanders, as I afterwards learned, are in great part Christianised, and even in many instances excel the Norwegians in their respect for the services of religion. Mr Zeltitz has two stations for residence—a Lap town called Karajok for winter, and one near the sea, at the other end of the parish, for summer. He has to travel much about at all times. I asked if he used horses for this purpose; he said no—there was but one horse in the whole parish. He travelled by reindeer, which the people, under certain regulations, were bound to furnish to him gratuitously. Meeting with such a man was at first attended with a curious feeling; but this was soon effaced by his gentle and amiable manners: and when I discovered that the North-Cape parson is a lover of the poetry of Byron, which he reads in the original, I ceased to think of him but as one of the people I am accustomed to meet daily. He inherits the poetical temperament, it would appear, from his father, who, likewise a clergyman, was a distinguished writer of verse about the era of the French Revolution, being particularly successful in convivial songs, many of which are still popular in Norway, though this is a style on the decay in that country, as it is with ourselves.

After the steamer had taken its departure, we once more prepared to set out; but presently another impediment appeared. A boat was seen gracefully moving up the calm fjord, rowed by ten men, who lifted their oars in a peculiar manner high above the water, while one gentleman sat in the stern. It was quickly understood to be the long-boat of the French corvette, probably bringing the captain ashore to call for Mr Thomas. A group

of us went down to the quay to wait his landing. The boat approached, and a handsomely-dressed naval officer stepped ashore. I felt the striking contrast between his perfect toilet and our mountain garb. We went back with him to the house, where he was introduced to Mrs Thomas, and renewed his acquaintance with her Hammerfest visitors. It appeared that his vessel was the *Pourvoyante*, of sixteen guns, engaged on a cruise for the protection of the French fisheries. She had been four months from home, and was now returning from Iceland to the south. I should have little expected beforehand that there was any common ground of social life on which I could have met this foreign naval officer; but the contrary soon appeared, for I recollected the name of his vessel as one which had been in the Firth of Forth two or three years ago, when she had unfortunately run down a smaller French vessel, and thus came in a painful manner under public attention in Edinburgh. The captain told me that he had been so unfortunate as to be concerned in the affair, having been commander of the lost vessel. Do not such recognisances in extraordinary circumstances seem to happen rather more frequently than we would naturally expect? Another curious circumstance was, that he had come to this lonely bay at the command of the French Admiralty, to take up some bulky instruments left ten years ago by the Scientific Expedition, landing for this purpose the day after I had come to test for the first time some of the scientific observations made by a member of that expedition. Moreover, he was now to sail to the Firth of Forth; and the next city in which he would set his foot was that in which I spend my life. We indulged in a penny-a-lining mood of mind regarding these 'curious coincidences' for a few minutes; and then, finding the Frenchman ignorant of the history of his country for the past two months, I informed him of the destruction of the party of the Mountain, and the flight of M. Ledru Rollin, in consequence of the insurrection of the 13th of June. After some further conversation, he politely took his leave of the ladies, and we all proceeded along the ford together, he to his vessel, and we on our way to Raipas.

R. C.

REPRODUCTION OF FERNS.

FERNS constitute a numerous and highly-interesting family of plants, found in all parts of the world where there is sufficient moisture and not too rigorous a climate; and although every one must be familiar with their appearance, from the example furnished by our common bracken, yet he would form a very imperfect idea of the tribe from such a specimen. Instead of creeping along with an underground stem, pushing up and unfolding its curiously-wrapped-up leaves as it goes, in St Helena, the Philippines, and other places, it arises with a majestic trunk from ten to fifty or sixty feet high, surmounted with an immense tuft of graceful foliage, and even emulates the palm in grandeur and beauty. Several of the order thus command attention by their lofty stature and imposing appearance; some astonish by their curious forms, as the hares'-foot of the Canary Islands; while all please by the delicacy and grace of their lively green leaves.

It is not our intention, however, to make a tour through the family, and take a glance individually at its most remarkable members, but to lay before the reader the recent discoveries in their fructification, hitherto so much a mystery.

Every tyro in botany knows that fertilisation is effected in flowering plants by the shedding of the pollen over the stigma; but in ferns the so-called seed appears on the back of their leaves, without being preceded by pollen or anthers, or any of the usual fertilising apparatus; hence they are ranged under the class Cryptogamia, or hidden fructification. Many attempts were indeed made to detect, and Hedwig, as well as others, imagined they had discovered, anthers, or bodies analogous to them, intermingled with the seed, or adjacent thereto; but no-

thing certain was known on the subject till lately, when Count Suminski* brought forward observations demonstrating the process of fructification, and its entire harmony with that of other plants.

Let us take a spore, or seed, as it is popularly termed, from the back of the leaf of a fern, where they are found in such profusion, place it in the soil, follow its progress, and, with the count as our guide, we shall soon arrive at a just conception of its development and mode of reproduction. The spore having germinated, first produces a leaf-like expansion, clinging close to the soil, and deriving nourishment from rootlets emerging from its under surface. This first leaf, or 'primary frond,' bears no resemblance to the true leaf of the fern, is very much alike in all species of the tribe, and is usually temporary. It is a most important part of the plant, however, for it is on this that anthers and pistils are produced, and fertilisation effected through their union. In order to be satisfied of this, let the primary frond be examined assiduously with a microscope of 300 or 400 lineal powers, and there will be found to arise amongst the common cells others of a peculiar character: instead of colouring matter, these contain granules, which speedily also become cells, packed up and pressing against each other within the parent cell, like the seeds of a pomegranate within the rind. These compound cells have been termed *antheridia*, and are analogues of the anthers of flowering plants, as we shall speedily see.

Besides these antheridia, which are usually pretty numerous, a few other bodies become apparent, consisting each of a cell with a tubular neck, somewhat resembling a Florence flask; at its bottom it contains a single germ-cell or embryo. These bodies have received the appellation of *pistillidia*, and represent the germs or rudimentary fruit of the more perfect orders of plants.

Having thus made out the parts necessary for fructification, let us pursue the process to its completion, and we have no doubt the contemplation of it will yield both instruction and astonishment. Following the progress of the antheridia, these are found to burst and liberate the secondary cells: each of these is seen to include a longish body, folded up on itself, which is set at liberty by the rupture of its prison walls, and is then shown to be in shape somewhat like a tadpole, with a slight enlargement at the tip of the tail. These have been designated 'spiral filaments,' and had been noticed by Negeli and others on the primary frond several years ere Suminski demonstrated their nature and use. As soon as the spiral filaments have been let forth by the bursting of the antheridia and secondary cells, they move about with a lively and independent motion through the mucilaginous fluid on the surface of the frond; and entering the open mouths of the bottle-like pistillidia, come in contact with the embryo at its bottom, and effect its fertilisation. Usually several spiral filaments enter one pistillidium, and the dilated extremities of their tails are applied to the embryo or germ-cell, just as we find many particles of pollen shed over the stigma of the higher order of plants in order to insure the 'setting of the fruit.'

The germ-cell or embryo being thus fertilised, instead of passing into the state of perfect seed, as in flowering plants, commences forthwith to grow; and by the ordinary process of cell-growth, pushing forth roots and leaves, gets gradually developed into the full-grown plant.

In flowering plants it is well known that the cotyledon furnishes the embryo with nourishment in the early stages of its growth, till, by the development of the necessary organs, it is able to support itself. In the fern, the primary frond acts the part of a cotyledon, by supplying nourishment to the fertilised embryo, until, having put forth leaves and roots, it is able to exist on its own resources.

From what has been here stated of this wonderful process, it is evident that the germ-cells of the pistillidia are the true seeds of the fern; but it is also plain that one of the purposes which seeds serve—namely, the multiplica-

* On the History of the Development of Ferns. By Count L. Suminski.

tion of the species—cannot well be effected by them; hence the production of gemmæ or spores on the back of the leaf.

In many plants do we find the production of detachable buds or bulbels, by which propagation or increase may take place: the familiar turncap lily carries a bulb in every axil of its stem; the begonia and achimenes frequently produce nothing else instead of flowers; yet although the parent plants may be reproduced and increased by these, one never thinks of calling them seeds; no more are the gemmæ of ferns entitled to be ranked as such. The inflorescence of the fern, in fact, seems to stop short in the middle of its course; and instead of 'showing flower,' unfolding the parts of fructification, and perfecting its seeds, as other plants usually do, it contents itself with forming flower-buds merely, which, separating from the parent, furnish the means of increase and dissemination. One of these finding a suitable resting-place, expands into the primary frond, bearing anthers and germs, and in this respect is quite analogous to the flower of flowering plants.

The supporters of the alternate-generation theory of Sars and Steenstrup,* would put forth the fern as an instance of this in vegetable life. Starting with the gemma from the back of the leaf, we have the phase A; arising from this we have the primary frond, or phase B; succeeding this are the antheridia and pistillidia, or phase C; the union of these originates the young fern, which, arrived at maturity, is phase D, giving birth to A again, and completing the circle. All these changes, however, are instances of morphological development merely, since true reproduction occurs only once in the series; and the same remark holds good in the pseudo-alternate-generation theory of animal life, as has been recently brought out by the discoveries of Sir J. G. Dalyell, Professor Owen, and others.

The interest of Suminaki's discovery of the fructification of ferns, here briefly detailed, is not confined to the elucidation of a curious process in nature: it is a great step gained in the consolidation of our ideas respecting the reproductive process generally, and so far a confirmation of the great physiological axiom—*Omnia ex ovo cum ovo*.

Column for Young People.

PHOEBE GRANT.

'MAMMA,' said Phoebe Grant, looking up from a frill which she had been dreaming over for half an hour, 'do you know Kate Collins was at the theatre on Wednesday night?'

'Well, Phoebe, and what then?' said her mother quietly.

'Why—why, mamma, only that I should like so dreadfully to go too.'

'Dreadfully, Phoebe?'

'No, no—not exactly that, but very much; you know what I mean?'

'I know well what you mean, my dear child; but I remember having often told you how much I dislike those strong expressions which you constantly make use of for the most trivial things. You will find out the disadvantage of it yourself some day; for when you really wish and require a strong word, you will not be able to find one which will express your feelings.'

Phoebe was silent, and the frill advanced a little. At last she could contain herself no longer. 'Mamma, may I go to the theatre?'

'Which theatre, Phoebe; there are so many in London?'

'I mean the prettiest of all, mamma; the one that Kate was at, where "Beauty and the Beast" is acted exactly as it is written in the fairy-tale book. It is not like a silly Christmas pantomime, mamma, which I never understand, but it is the dear old tale that you used to tell me so often; and Kate says the last scene, where

Beauty consents to marry the Beast, and when he changes all at once into a handsome young prince, is the most beautiful thing she ever saw. Oh, may I go?'

Mrs Grant thought for a little, and then said, 'You know I have not been quite pleased with you lately, Phoebe. You have been very idle indeed for two or three days. That piece of work in your hands ought to have been finished long ago, yet here it is not nearly done. You allowed the least thing to distract your attention.'

'Oh, mamma, I will finish this horrid frill to-day, and be so good that you won't know me.'

Her mother smiled, and replied, 'That is not very flattering to yourself, my dear child; however, as a little idleness has been your only fault lately, you shall go and see "Beauty and the Beast," and this very night too; but upon three conditions.' Phoebe gave a little scream of delight, and her mother continued—'Your aunt and cousins are going this evening, and I will join them, and take you too, if you do as I wish.'

'Yes, yes, dear, kind, good mamma: tell me what it is I must do?'

'It is now twelve o'clock, Phoebe; well, one of my conditions is, that by two this frill shall be finished, and neatly too.'

'Oh, mamma, there is so much of it to do!'

'Not more than you can easily manage if you are busy, Phoebe. Another is, that during these two hours you do not go into the garden, but stay in this room: I know if you leave it, the frill will never be done. The third is, that you do not have a word to say to Luna during that time. Do not interrupt me. I know she will come and scratch at the window, and wag her tail, and intreat you to come and play with her; but keep your eyes upon your work, and she will soon go away. After two o'clock you may play or do what you choose. I am now going to town upon some business which will occupy me till three o'clock; but remember the frill must be finished by two.'

Phoebe joyfully promised; and a short time after, her mamma left her, and went out. At first all went on brilliantly: Phoebe worked busily—so busily, that she became very warm, and accordingly opened the window and placed her stool beside it. The air was pleasant and refreshing, and the mignonette and sweet-peas which were under the window smelt deliciously, and cooled Phoebe's hot brow. Her work fell from her hands, and she began to think how charming it would be to see her favourite fairy tale acted. One thought leads to another. Thinking of Beauty suggested the rose which had cost her father so much pain to procure. 'How much I should like a rose just now! My own little garden, where the best roses grow, is not very far from this; I might run to it, and come back again in an instant. But mamma said I was not to play in the garden. True—but then she said it was because she knew I should not work if I were there. Now I am so hot here, and it looks so cool in my honeysuckle-bower, that I am sure I should work a great deal better there. I am quite certain if mamma had known I could work better in the garden, she would have told me to go. I can tell her when she returns that I was very hot, and if I had stayed in the house, could not have finished my frill. I know she will not be displeased.'

All these thoughts passed through Phoebe's brain very rapidly; and acting upon the impulse of the moment, she ran down the steps which led from the window upon the lawn. She first plucked the rose she coveted, and then proceeded to the bower of honeysuckles, which was her favourite retreat when she was tired of everything else. 'How pleasant it is here!' she thought. 'How much nicer than being in the house! The sun is so bright, and seems to kiss the little flowers, that nod and say how glad they are to see him. How happy the bees are to feed upon this delicious honeysuckle: I should almost like to be a bee!' and thinking of this, the work fell from Phoebe's idle hands. 'Oh what a beautiful butterfly!' she exclaimed, as one of a delicate blue colour settled upon a carnation which was near the bower. It is just the kind that Robert wished

* See No. 160, new series.

so much, and how delighted he would be if I were to get it for him.' With noiseless steps Phoebe went on tiptoe to the carnation: her apron raised in both hands, she stooped to entrap the beautiful creature which was fluttering on the flower. Her heart beating, her eyes glistening, she was just going to encircle it, when something behind pulled her dress. The movement startled the butterfly, which flew off immediately, and Phoebe, disappointed of her prey, turned round to see what had touched her. To her dismay she saw Luna scampering off with the frill, which she had left lying in the bower. 'Oh Luna, Luna! give me my frill. Oh you naughty dog, lay it down instantly!' But Luna evidently thought his mistress was playing with him as usual, and ran round and round the beds with the frill in his mouth, enjoying the fun of being chased amusingly. 'Oh naughty, naughty dog, you shall be beaten if you do not give me my frill.' But off flew Luna, regardless of the threatening words, which doubtless he knew well would never be fulfilled.

The gate leading to the road at the end of the garden was open, and the dog darted out, followed by the distracted Phoebe. When she got upon the road, she saw Luna at a little distance rolling over and over with the frill in the mud, and barking with all his might. Phoebe rushed up, and this time succeeded in seizing it. Alas! it was scarcely fit to be touched, being covered with mud. 'What shall I do!—what shall I do!' thought Phoebe. 'Oh this comes of going into the garden when I was forbidden! How disobedient I have been! Oh what shall I do!' Phoebe walked slowly into the house, resolving in her mind what she could do to mend matters. 'The frill is not torn. Ah, I know what will make it all right,' she cried joyfully, as a happy thought struck her mind: 'I will wash it—not very clean though, for it was dirty before—and iron it, and then no one will be any the wiser. There is always a fire in mamma's dressing-room, where I can heat the iron nicely.' Phoebe flew into the bedroom, where she carefully washed the frill, although it took longer than she had expected: she then rushed down to the closet in the laundry, where she knew the irons were kept, and succeeded in finding a small one. The fire in the dressing-room was excellent, so that the iron did not take very long to heat, although it seemed hours to the impatient Phoebe, who trembled lest any of the servants should come in. The clock struck two as she finished ironing the frill. Phoebe was in despair. 'How unfortunate I am,' she said; 'there is two o'clock, and the frill not nearly done!' Then she began again to reason within herself, forgetting into how much trouble her reasoning powers had brought her before. 'Mamma said I was to finish the frill in two hours; now I have only worked at it one hour: since one o'clock I have not put a stitch in. Mamma does not come in till three; if I am busy, I shall be able to finish it by that time, and perhaps she will not ask me when it was done. Thus it will be only two hours after all.'

Phoebe accordingly set to work in right-down earnest, never looking up once till she had come to the end. As the last stitch was put in, the hands of the timepiece pointed to five minutes past three.

'Good gracious!' said Phoebe to herself, 'mamma will be home immediately, and there is the iron still on the grate. I must take it into the garden to get cold before I put it away.' Hastily she seized the iron, forgetting that it must be very hot, although it had not been exactly on the fire. But she threw it down in a moment, and drew back with a scream. 'Oh my hand—my poor hand, how it is burnt! Oh, oh, what shall I do! How dreadfully painful it is!'

Phoebe knew that cotton-wool was an excellent thing for a burn, but she did not remember where to get any. Looking round the room vaguely, as if she expected to see some of the wished-for article lying near, she espied her mamma's jewel-box upon the toilet-table. 'Ah, I know there will be some there, and the key is always in that little drawer.' To the little drawer she went, took out the key, opened the jewel-box, touched a

spring which she knew of, and to her great joy saw a quantity of cotton-wool, which her mamma generally kept there. She pulled out a large piece, but in doing so did not perceive that she also pulled with it an earring which was lying there, and which fell unheard on the floor. Phoebe locked the box, put the key back again in the drawer, wrapt her hand in the wool, which she found soothed the pain very much, and carefully took the iron into the garden, where it soon got cold. She had just placed it in the closet, when the carriage drew up to the door, and her mamma stepped out.

Phoebe flew up stairs, and was met in the hall by her mamma, who kissed her affectionately, and asked if the frill was done.

'Yes, mamma, quite done,' said Phoebe.

'I am glad of that, darling,' said her kind mamma. 'And did you finish it in two hours?'

'In two hours and five minutes exactly.'

'Ah, well, five minutes don't matter,' said her mother smiling: 'it will make no difference. Jane and Laura are quite delighted at the prospect of having you with them to-night. They are to be here at five o'clock precisely; and see—here, Phoebe: I have been to your favourite Piver's in Regent Street, and brought you two pairs of gloves, one of which you must wear this evening. I have also got some of that "Rose-ché" scent for you, which you like so much.'

'Oh, thank you, dear mamma,' said Phoebe in a low voice, stretching out her left hand to take the gloves and scent. The right hand was employed in searching for a refractory handkerchief, which was supposed to be at the bottom of her pocket, but somehow never made its appearance. Her mamma's kindness quite staggered Phoebe, and as she followed her up stairs, her eyes were full of tears. The frill, the sight of which made her quite sick, was lying upon the dressing-room table. Mrs Grant took it up, and admired the work.

'It is very nicely done indeed, my dear child,' she said: 'you see what can be done if you set your mind to it. You have worked this very well indeed. Did you fulfil my other conditions?'

At this moment a knock was heard at the door, and one of the servants entered to speak to Mrs Grant on some household matters. Phoebe, rejoicing at the opportunity, was just going to leave the room, when her mother called out to her, 'Do not go away, dear; I wish to speak to you.'

Phoebe was obliged to remain, and wondered what her mamma could have to say. When young people's consciences are not very clear, there is always something indefinitely awful in being desired to speak with mamma upon anything not specified; and as Phoebe's conscience was far from being calm, she felt rather uneasy. She wandered about the room, sometimes ready to scream with the pain of her hand, which now became almost intolerable. 'How shall I get on my gloves to-night?' she thought: 'my hand is all in blisters! I cannot deceive mamma any more. I might say that my foot slipped, and that I fell forward with my hand on the ribs of the grate; but I could not say that—it is wrong even to think it. But how shall I tell mamma! Oh dear, oh dear, how wicked I have been!'

The servant at last left the room, and Phoebe stood with her eyes cast down, her lips compressed, waiting to hear what her mamma had to say. At this moment Mrs Grant, who was crossing the room, trampled upon something, and stooped to see what it was.

'How extraordinary!' she said aloud. 'Why, how can this be!—my earring on the ground, when I distinctly recollect putting it this morning in the secret drawer of my jewel-box! No one knows the spring—except indeed Phoebe. My dear child,' she said, looking round; but the 'dear child' had sunk upon a couch, exhausted with pain and shame. 'My darling!' she cried, rushing towards her, 'how pale you are—how ill you look! Tell your mother what is the matter!' Phoebe silently raised her poor hand, still enveloped in the cotton-wool. 'Phoebe! how is this! Ah, I see—my poor child has burnt her hand, and has concealed it from her mother

for fear of agitating her. My dear, good child, how nobly you have borne the pain! Ah, it is frightful! she continued with a shudder, as she unbound the wool, part of which stuck to the unfortunate hand.

Phoebe could bear it no longer. Bursting into tears, she threw herself into her mother's arms, and sobbed as if her heart would break. 'Oh no, mamma—no, dear, darling mamma!' she said as soon as she could speak, 'I have not borne it nobly!—I do not deserve your kindness, my own beloved mamma! I have been naughtier to-day than I ever was before. I have disobeyed you in everything: I have been in the garden; I did not finish the frill till three o'clock. You do not know how wicked I have been; but I have been punished, for my hand is dreadful. I may say that word now, mamma. But my shame at having deceived such a good mamma is worse.'

Mrs Grant kindly soothed the poor child, and begged her not to say any more till she was composed. A short time afterwards, when Phoebe was lying cushioned on the soft couch in the dressing-room, with her mamma beside her—that dear mamma, one touch of whose gentle hand seemed to soothe the pain which she suffered, and almost to chase it away—she eased her heart by confessing everything. The tears were in the mother's eyes when Phoebe had finished.

'You are sufficiently punished already, my child, and I will not say anything more about it. We will put away the unfortunate frill.'

'Oh no, mamma, the poor frill shall not be put away. It was intended for you, mamma; but if you will allow me, I shall have it sown on to my cap, so that when I put it on at night, I may remember why it is there. I do not think, mamma,' she continued, smiling, 'that I shall ever be disobedient again. No, I am sure I shall not. Do you know, mamma, I am so very glad I burnt my hand!'

'Glad, Phoebe! Why!'

'Because, mamma, I am afraid that if it had not been for that, I should not have told you about going into the garden, and not finishing the frill; and then how miserable I should have been at the theatre after having deceived you so much!'

'That is very true, my dear child,' said her mamma, affectionately kissing her. 'And I am glad too, for I feel confident that the misery and pain you have endured to-day is a lesson which will be remembered by you all your life.'

J. G. C.

OCCASIONAL NOTE.

DR BUCKLAND ON ARTESIAN WELLS.

LONDON thirsts for water. She is at present the victim of seven monopolist water-companies, who only supply the element to 200,000 out of the 270,000 houses of which she is said to consist. Nor is the fluid so supplied either of the best or the cheapest. After it is drawn from the filthy Thames, it is so infiltrated and 'purified' that it becomes flat and exhausted, which with temperance communities—who are as critical about their water as *gourmets* are respecting wines—is a serious evil. Even for an ordinary supply of this, a small house of £50 a year rent has to pay about four guineas per annum. The New River is the only other source of supply; and it is not every London parish that can boast of a single pump.

In this truly tantalising condition, the Londoners are at last opening their parched throats to emit cries for 'more water!' Plans are propounded, companies are started, and controversies are fluently engaged in, for the purpose of answering the desperate demand. One party is for exhausting the Thames a little more by robbing the hoary father of rivers of the purest of his waters at Henly; another is for draining the Wardle or the Lea; and a third set of advocates are strongly in favour of Artesian wells.

About these last much misapprehension exists; and the opinion of so eminent a geologist and hydrographer as Dean Buckland is of value not only to those who take a

side in the dispute, but to those who are interested in the general subject of Artesian wells. At a recent meeting of the Institute of British Architects, the doctor denied a statement which had been put forth, that sufficient water might be obtained in the metropolis by Artesian wells to afford an ample supply to ten such cities as London. He would venture to affirm, that though there were from 250 to 300 so-called Artesian wells in the metropolis, there was not one real Artesian well within three miles of St Paul's. An Artesian well was a well that was always overflowing, either from its natural source, or from an artificial tube; and when the overflowing ceased, it was no longer an Artesian well. Twenty or thirty years ago there were many Artesian wells in the neighbourhood of the metropolis—namely, in the gardens of the Horticultural Society, in the gardens of the Bishop of London at Fulham, and in Brentford and its vicinity; but the wells which were now made by boring through the London clay were merely common wells. He had heard it said that Artesian wells might be made in any part of London, because there was a supply of water which would rise of its own accord; but he could state with regard to the water obtained to supply the fountains in Trafalgar Square, that it did not rise within forty feet of the surface—it was pumped up by means of a steam-engine. No less than £18,000 had been spent upon an Artesian well which had been made on Southampton common, but the water never had risen within eighty feet of the surface, and never would rise any higher. The supply of water formerly obtained from the so-called Artesian wells in London had been greatly diminished by the sinking of new wells. Many of the large brewers in the metropolis who obtained water from these wells had been greatly inconvenienced by the failure of the supply; and he had received a letter from a gentleman connected with a brewer's establishment, stating that the water in their well was now 188 feet below the surface, while a short time ago it used to rise to within 95 feet. Indeed the large brewers were actually on the point of bankruptcy with regard to a supply of water.

A gentleman present corroborated the Rev. Dean by stating that certain London brewers, who obtained their supplies of water from what are called Artesian wells, had been forced into a mutual agreement not to brew on the same days, in order that each might have a sufficient supply of water.

The single example cited by Dr Buckland as to the expense of these wells can be extensively supported. One lately sunk opposite the fashionable church of St James has cost, first and last, not far short of £20,000; and another, in which the Hampstead Water-Company have already, it may be said, literally *sunk* £14,000 at Highgate, has as yet made no sign, not a drop of water having been yet obtained. These facts may serve to moderate the exhortations of the more ardent advocates of Artesian wells.

THE LIFE OF NAPOLEON IN A QUARTER OF AN HOUR.

[About ten years ago the following burlesque narrative was performed as an interlude in a Parisian theatre, by a clever actor in the character of an old soldier of the Empire. It suffers of course by translation, and still more by being only read, while the briskness, abruptness, and slang style of the veteran are unexhibited. It is, nevertheless, worthy of appearing even under the disadvantages of an English dress:—]

SILENCE! and you shall hear all about Napoleon—a famous individual, born in Corsica, a little tail of a country, not two doors from the sea, where the natives have a fatiguing habit of assassinating each other, from father to son. His parents put him to the military school—full of talents—with a little three-cornered hat, and his hands behind his back—imitating already his portrait. He worked so hard that his eyes were hollow, and his face—saving your presence—the colour of nankeen breeches. When the masters of the school saw this, they said, 'There's a youth who has a real taste for the artillery.' Presently, having pushed his way to a very young age, behold him general!—very

thin—always very thin, but with long hair—ah, such long hair, to be sure! The government of that epoch, which was composed of five individuals, adorned with feathers, sent for him, and said, 'Now, then, my good little man, you see the thing is this—you must start for Italy, where the Austrians are playing the deuce at forty sous a head, and give them such a shove that the devil would take arms for it.' When he heard all that, says he, with that funny hair and yellow face, 'Agreed—say no more!' and away to Italy—the country of vermicelli and fiddle-strings. He crossed St Bernard—a great mountain, very high—three times Montmartre, where there is a famous hospice kept by the monks. Here are poodle-dogs, charged by the government to go and scrape for individuals under the snow. It is a great philanthropy, that same, on the part of these poodles. For my part I have no talent in that way: I was not bred to the business small enough; one must be caught young for that 'ere profession. Once in Italy, he did serve out to the Austrians such a pounding! and returned to Paris with millions of thousands of colours and glories—to fill the Invalides. Stop a bit—our little friend's off for Egypt. Ah! ye gods, big and little, my good friends—a nasty territory that Egypt (so said my Cousin Baptiste, a drummer in the 37th, now getting on with a wooden leg)—a country of 160 degrees of heat in the middle of winter, and nothing to drink but fine sand—fine, fine, fine sand—and crocodiles walking about like good citizens, and swallowing up Christians with their arms and baggage—according to the botanists! Oh dear—me, there are neither inn nor straw in nature! and then the old broken pillars past service, and huge vagabonds of sugar-loaves all in stone, where them there folks keep their kings fresh, which is a great satisfaction in that country, enamelled all over with camels and dromedaries. It was then that the Mamelukes had the pleasure—that is, all that were not so unlucky as to catch a cannon-ball—to be drowned provisionally in the Nile. Napoleon, who was then Bonaparte only, when he saw that grand infusion of Mamelukes, said, 'Is it not delicious?' Back he comes to France, leaving behind him one General Kleber, who found himself assassinated one day by a villain thereabouts, who was requested to be seated on a bayonet, which is the way they guillotine individuals among the Mohammedans. Then Napoleon married his wife, a beautiful woman—very beautiful—full of good qualities, and much sweetness—all along of having been born in Martinique, the country, you know, of sugar-canes. Next you have him again at the enemy, banging away at Eylau, Friedland, Austerlitz. The devil's in the little man—what a country dance! and what rascals the vanquished! all foreigners! and all speaking German! For my part I cannot comprehend how they manage to understand each other. Says Napoleon one day, all to himself, says he, 'Let me think now a little moment—if I should happen to die, who's to take the reins of government? I am very sorry, because as how, you see, Josephine is my wife, and I have the highest consideration for her; but mon Dieu! mon Dieu! the Empress is so well on that she never can make me the least in the world a present of a small King of Rome. My position is of extreme triviality.' Well, off he goes to the emperor of Austria, who had a long queue, and said to him, 'The public demands that I have one of your daughters, with whom I am much taken—no matter which.' The emperor of Austria, thinking him a good-looking chap, with a good place, gave him his daughter entirely. In a quarter of an hour Napoleon went to take a walk in Russia with eight hundred thousand clever lads; but he met such a thief-like cold—cold that froze the very fire, and which was only a little warmed by the burning of Moscow. After burning their town from top to bottom, the enemy somehow or other contrived to come to Paris, and had the audacity to say—the gascons!—that they had conquered us! Just then our little usurper, finding all the world in a passion with him, uttered these ever-memorable words, 'I'm off!' and so took a trip to Elba, and then came back to pay us a little friendly visit; but our unfortunate hero was passed by the English from brigade to brigade all the way to St Helena; and at this hour—would you believe it?—in that England so renowned for its generosity and brilliant shoe-blackening, they have come actually to say that Napoleon is dead! and even here there are people weak enough to give faith to such an indecency. He dead! Never! He knows better: he is incapable of it; he feigns to be dead—that's all. But he is digging, digging, digging, and one fine morning he will jump

out of his hole, with his little three-cornered hat, his hands behind his back, and three millions of Niggers for the good of his country! There you have got the history of Napoleon!

MANUFACTURE OF GLASS BEADS.

Besides the invention of mirror and reticulated glasses, for which we have to thank the Venetians, the art of making glass beads was also first discovered in the glass-houses of Murano, and is practised there at the present day on a very extensive scale. The small glass beads are fragments cut from pieces of glass tubing, the sharp edges of which are rounded by fusion. Glass tubes of the proper size are first drawn from 100 to 200 feet in length, and of all possible colours (in Venice they prepare 200 different shades), and are broken into lengths of two feet. These are then cut by the aid of a knife into fragments of the same length as their diameters; they now present the form of beads, the edges of which, however, are so sharp, that they would cut the thread on which they have to be strung. The edges have consequently to be rounded by fusion; and as this operation must be performed upon a great number at once, and they must not be allowed to stick together, they are mixed with coal-dust and powdered clay previous to their being placed in the revolving cylinder in which they are heated. The finished beads are then passed through sieves sorted to their size, and strung upon threads by women. Besides the ordinary knitting beads, another kind is manufactured, called *perles à la lune*, which are firmer and more expensive. These are prepared by twisting a small rod of glass softened by a glass-blower's lamp round an iron wire. The glass beads made in imitation of natural pearls for toilet ornaments, the invention of which dates from the year 1656, are very different from the preceding both as regards their application, mode of production, and origin. These are small solid glass beads of the same size as native pearls, which they are made to resemble by a coating of varnish, and which gives them a peculiar pearly lustre and colour. A maker of rosaries, by name Jaquin, was the first to discover that the scales of a species of fish (*Cyprinus alburnus*), or bleak, communicate a pearly hue to water. Based upon this observation, glass globules were first covered on the outside, but at a later period on the inside, with this aqueous essence. The costly essence, however, of which only a quarter of a pound could be obtained from the scales of 4000, was subject to one great evil, that of decay. After trying alcohol without success, in consequence of its destroying the lustre of the substance, sal-ammoniac was at length found to be the best medium in which to apply the essence; a little isinglass is also mixed with it, which causes it to adhere better. The pearls are blown singly at the lamp; a drop of the essence is then blown into them through a thin tube, spread out by rolling, and the dried varnish is then covered in a similar manner by a layer of wax.—*Knap's Chemistry applied to Arts and Manufactures.*

TURKISH DINNER.

A Turkish dinner usually consists of only two dishes; but each dish is composed of a variety of ingredients, such as meat, poultry, fish, &c. From these dishes the guests are helped with spoons of black horn: the handles of the spoons used at our dinner were set with diamonds. The dessert, which was served on dishes of silver beautifully wrought, consisted of peaches, oranges, fresh figs, almonds, and a variety of exquisite sweetmeats. Coffee was served in cups of costly porcelain, and cruet of wrought gold contained liqueurs. Those placed before the princes were set with diamonds and fine pearls. The napkins were of a fabric resembling cambric, extremely fine, and so silky, that its surface, reflected by the radiant light of the lamps, presented the effect of silver-tissue. There was one Turkish custom which was calculated to create an unpleasant impression, in spite of all the delicate courtesy with which we were treated. Every vessel out of which Christians, or, as we are called, infidels, have eaten or drunk, is condemned as impure, and is set aside, never again to be used by Mohammedans. Accordingly, we were requested to carry away with us the plates, cups, &c. which we had used at dinner. We could not take umbrage at this little affront, concealed as it was under a graceful veil of generosity. We accepted the offerings, which, independently of their intrinsic value, were objects of curiosity; and we promised to preserve them as memorials of our delightful visit.—*Adventures of a Greek Lady.*

THERE'S LIGHT BEHIND THE CLOUD!

In the lone and weary nights, my child,
When all around is drear;
When the moon is hidden by the clouds,
And grief and pain are near—

Oh never think, my gentle boy,
In that gloomy, trying hour,
That thou art not protected still
By a kind Almighty Power!

Soon will those dark clouds roll away,
And the glorious stars appear;
And the pensive moon, with her calm, pale light,
Will shine in beauty clear.

There is an Eye above, my child,
That slumbers not, nor sleeps;
There is a Friend in heaven, love,
Who still His vigil keeps.

And though in trouble's darkest hour
His face He seems to shroud,
Believe—remember—oh, my child,
There's light behind the cloud!

K. M.

IMPORTANT INVENTION.

Mr M. Smith Salter of this city has just obtained a patent for an invention which it is believed is destined to have a most important influence upon the useful arts of life, and the industry of the country and the world. It is a new method of making iron direct from the ore, with anthracite or bituminous coal, by a single process. By means of this remarkable invention Mr Smith proposes to make wrought-iron at a cost of 25 to 30 dollars per ton—at least half the usual cost. His furnace has three combined chambers, one above the other, and all actuated by the same fire. The upper chamber is used for deoxidising the ore—impurities, such as sulphur, &c. being carried off at a low temperature; the middle chamber for fluxing and working; and the lower chamber for reducing and finishing. The metal is taken from the last-named to the hammer or squeezers. The whole time occupied in this

process, from the time the ore is put into the furnace until finished by the hammer, is only two hours! We understand that one of his furnaces is now in operation at Bonton, in Morris County. We have a specimen of iron from it, which is pronounced to be of the very best description. Perhaps a more important invention—if fuller experiments should verify present anticipations—has not been introduced in many years. Its effect upon the production and consumption of iron must be immense.—*Newark (New Jersey) Advertiser.*

A FAITHFUL SLAVE LIBERATED.

The following is an extract from the will of Judge Usher, late secretary of state of the United States, killed by the explosion on board the steamer Princeton:—“I emancipate and set free my servant David Rich, and direct my executors to give him one hundred dollars. I recommend him in the strongest manner to the respect, esteem, and confidence of any community in which he may happen to live. He has been my slave for twenty-four years, during all which time he has been trusted to every extent, and in every respect. My confidence in him has been unbounded; his relation to myself and family has always been such as to afford him daily opportunities to deceive and injure us, and yet he has never been detected in any serious fault, nor even in an unintentional breach of the decorums of his station. His intelligence is of a high order, his integrity above all suspicion, and his sense of right and propriety correct, and even refined. I feel that he is justly entitled to carry this certificate from me in the new relations which he must now form: it is due to his long and most faithful services, and to the sincere and steady friendship which I bear him. In the uninterrupted and confidential intercourse of twenty-four years, I have never given, nor had occasion to give, him an unpleasant word. I know no man who has fewer faults or more excellencies than he.”

The present number of the Journal completes the twelfth volume (new series), for which a title-page and index have been prepared, and may be had of the publishers and their agents. *

NEW SERIES OF TRACTS.

Early in the approaching year will be issued the First of a New Serial, to be entitled

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PAPERS FOR THE PEOPLE.

The remarkable success which attended the publication of CHAMBERS'S MISCELLANY OF USEFUL AND ENTERTAINING TRACTS—a work which left off with a weekly sale of 80,000 copies—has in some measure induced the Editors to project the present Serial, which, however, will differ considerably in scope and appearance from its predecessor, and be in various respects a novelty in Literature.

The work will be published in Weekly Numbers, at Three-halfpence each; and a Volume, consisting of Eight Numbers, will be issued every Two Months, done up in Fancy Boards, Price One Shilling and Sixpence.

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